

EYP/® minutes

To:	Attendees	Date of meeting:	June 11, 2019
Project Name:	Bull Run Hall Addition	Time of meeting:	3:45-5:30
Project No.:	1019004.01	Location of meeting:	Sci Tech, IABR, Conf Rm 1004
		Meeting Number:	2.8

Meeting Purpose: Human Performance Spaces

Attendees:

George Mason University:

- Dominique Banville, Kinesiology
- Debra Stroiney, Kinesology APC
- Joel Martin, EFHP HPC
- Amanda Caswell, SMART Lab/ATEP/CEHD (by phone)
- Shane Caswell, SMART Lab/ATEP/CEHD (by phone)
- Laura Manno, Provost/Planning
- Colby Grant, Sci Tech Admin
- Laura Manno, Provost/Planning
- Debbie Brady, Facilities
- Virginia Steele, Facilities
- Joy Staulcup, Facilities

EYP:

- Melissa Burns, Academic Planner
- Brian Tucker, Lab Planner
- Rebecca Ross, Planner/Architect
- Suzanne Klein, Project Director

Minutes:

General Comments:

The group met on George Mason University's SciTech campus. The purpose of the meeting was to discuss each functional space type in more detail and to identify the following for each space:

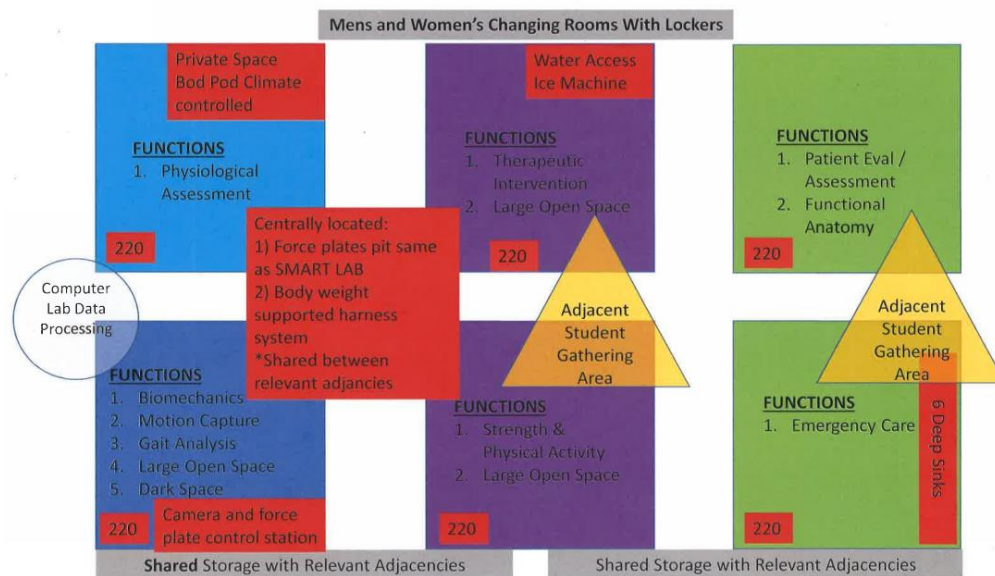
- Number of students
- Type and style of teaching
- Timing of courses (Fall/Spring/Summer, Frequency, Time)
- Key adjacencies,
- Prep/Storage needs
- Major equipment

1. **Introductions:** Laura Manno introduced the meeting and provided a brief project overview to the group for new attendees that were not in the last programming meeting. She explained the process and purpose of the building and that there will be ongoing conversations on scheduling, logistics and budget. There were diagrams on the wall which were presented at the last building committee meeting and were the starting point for this set of interviews.



The green bar represents a typology in the building and the gold groups represent a function of the type followed by a list of uses. The function could be representative of one or more spaces and are a way to think holistically and collaboratively about space within the building.

2. The Human Performance Group brought a diagram to help describe each functional space type. The design team used this as a starting point for the discussions. The colors represent similar functions.



3. Student population is both Undergraduate and Graduate. Heavy usage of the labs in the morning will be undergraduate (Assume 400 undergraduate students this fall; could be 500 or 550 by Fall 2023). Heavy usage of the labs in the afternoons, evening and weekends will be Graduate courses and projects (assume 25 grad students)

4. **Biomechanics:**
 - a. Assessment tools to analyze human movement
 - b. Gait analysis with motion capture technology.

- Motion capture is a sub-function under Biomechanics.
- Laura explained that the two motion capture spaces in the program (Game Design and Human Performance) are two separate spaces.
- c. Need large open space
- d. Equipment:
 - Force Plates (multiple configurations)
 - Ultra Sound imaging
 - Harness
- e. # of Students: 25 students max (20 for graduate, 6-8 PhD)
- f. Courses:
 - Undergraduate: 3 sections in fall, 1 section spring, 1 section summer
 - Graduate: 1 section in fall
 - PhD: 2 sections per year (instrumentation class, research project)
 - 1 Section (Masters) Movement fitness assessment class would use this space
 - 1 section (Masters) Strength and Conditioning would use this space
- g. Classes are taught half time in a lecture classroom, half time in a lab
 - Seating could be in the lab if it can be put away
 - Class-a-tory model
 - No interference for activities
- h. When motion capture is in use, the lab should be a dark space with little ambient light
- i. Min. height 12' ceiling (today's SMART Lab is 15' which is ideal)

5. Physiological Assessment:

- a. Could potentially share a space with Biomechanics. Courses use different spaces at different times (separate classrooms and labs). Lecture every week, don't necessarily have a lab every week
- b. Equipment:
 - Metabolic cart
 - Treadmills w/ 10' high harness frame
 - Bod pod (needs separate space from larger room, climate controlled & private)
 - Exam table
 - Stationary Bike
 - Flat Screen to display data projection/demos
 - Each piece of equipment has an associated computer
- c. # of students: 25 students
 - Exercise testing class (2 sections fall, 2 sections spring, 1 section summer)
 - Exercise Physiology (2 sections in fall, 2 sections spring)
 - Strength and Conditioning (1 section, Masters) (50% use)
 - Exercise programming for Special Populations
- d. Strength and Conditioning:
 - Uses off campus facility currently
 - Equipment not easily movable
 - Will use the group fitness room also (go between labs)

6. **Athletic Training / Patient Evaluation and Assessment:**

- a. Bounce back and forth between lab and classroom; split time or a combined class-lab. Teaching format is 20 min lecture, 20 min lab and back and forth.
- b. # of Students: 25 students
 - Functional Anatomy (4 sections Fall, 4 sections Spring, 1 Section Summer)
 - Adv. Functional Anatomy (2 Sections)
 - Lower Body Evaluation (2 Sections; 3 credit Lab associated)
 - Upper Body Evaluation (2 Sections; 3 credit Lab associated)
- c. Equipment:
 - Plinth tables (min. 10)
 - Models
 - Skeletons/joint, full sized, body parts
- d. Adjacencies:
 - Adjacent to Cadaver Lab
- e. Need storage for skeletons

7. **Athletic Training / Emergency Care:**

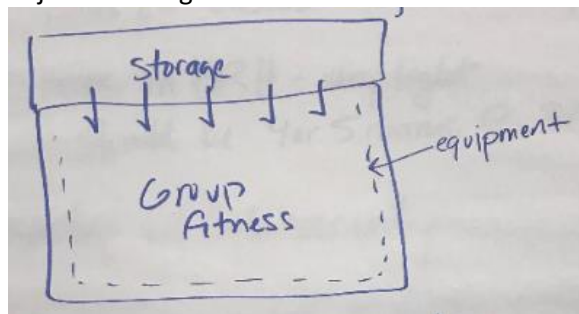
- a. # of Students: 25 students
 - First-aid CPR (4 sections fall, 6-8 sections spring, 2 sections summer)
 - Emergency Care for Athletic Trainers (2 sections fall)
- b. Equipment:
 - Mannequins
 - Tables to practice wound care & patient care (plinth tables)
 - Deep sinks
 - Ice Machine
 - Laundry
- c. Skills based lab; need large open floor space
- d. Need storage for equipment

8. **Athletic Training / Therapeutic Intervention:**

- a. # of Students: 15-17 students
 - Foundations of Therapeutic Intervention (2 sections in summer)
 - Lower Body Therapeutic Intervention (3 credit lab; 2 sections in fall)
 - Post Rehabilitative Therapeutic Intervention (2 sections in fall)
 - Upper Body Therapeutic Intervention (3 credit lab; 2 sections in spring)
- b. Equipment:
 - Ice Machine
 - Ultra Sound
 - Water Access and drainage
 - Whirlpools (4); (2) full body, (2) smaller cryotherapy
 - Plinth tables (min 10, need them 50% of the time)
- c. Need access to equipment in Strength and Physical Activity
- d. Didactic lecture; go back and forth between lecture and lab
- e. Look at Moravian College
 - Circular set up w/ screens above the tables to see faculty member

9. Strength and Physical Activity:

- a. # of students: 20 students
 - 2 sections fall, 2 sections spring, 2 sections summer
 - Strength and Conditioning (1 Section Masters) (50% use)
 - Motor Learning Class
 - Open Lab
- b. Equipment:
 - Wall mounted rigs
 - Olympic lifting platforms
 - Resistance training
- c. Equipment isn't easily movable
- d. Large open space
- e. Not scheduled all the time – classes come in and out.
- f. Strength and Conditioning and Group Fitness could share the space if there was adjacent storage:



10. Force Plates:

- a. **Homework**: Nelson Cortes was not present at this meeting. Need to meet with him to get more information on the force plates.
 - Central or Linear configuration?
 - What are the minimum dimensions need for this space?
 - Configurable
- b. Computer Lab / Data Processing:
 - Students need to review data from the Force Plate, Motion Capture, EMG, etc.
 - Space for 6-10 people to meet around a large screen
 - Small teaming area

11. General:

- a. Could Plinth tables be shared between therapeutic intervention and emergency care?
- b. Include student gathering space outside of the lab for informal learning
- c. Consider location in the building
 - Outside research participants coming to the facility
 - Elevator Access
 - Consider weights being dropped on the floor
- d. Changing areas
 - Urine Collection
 - Changing/locker room

- Shower
- Student belongings
- Discussed designing restrooms like IABRL – combined lockers and shower in the restroom

HUMAN PERFORMANCE

Motion Capture: *220V
Heavy use mornings
Weekends + evenings - student research

Dark space:
- For Motion Capture
- sectioned off

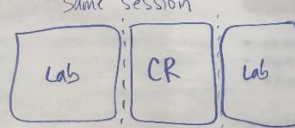
Storage:
- smaller equip
- perimeter storage

Bio mechanics:
Assessment w/ motion capture tech
- ultra sound
- force plates - large open space

400 students SE/SF-yr. ^{this Fall}
UG - 3 sections (Fall) | 1 section (Spring) | 1 section (Summer)
Grad - 1 section per year. Masters / 1 phd per yr.
(Master + Phd)

max → 25 students undergrad - Instrumentation class 1 section
20- graduate 6-8 phd

- strength + conditioning - (1 section Masters)
- Movement + fitness assessment (1 section Masters)
- Lecture portion + lab portion 75 min 2x/wk OR in classroom (1 HR)
- place for students to sit
↳ no interference for activities
- prefer start w/ lecture move to lab same session



- 12 ft. min. height
- 15 current/ideal space
- harness

Physiological Assessment:

- *Computer carts
- Bike (stationary)
- metabolic cart - flat screen - data projection - exam table - Demo
- bod pod - climate controlled - enclosed room - privacy
- treadmill / 10' + tall

Exercise Testing: 20-25 students / 1 section Summer
" Physiology: 2 section Lab Spring + Fall / 25 students
Strength + conditioning
Exercise Programming...

Men + women lockers / changing rm.
25 students lecture + lab

Athletic Training

① Patient eval + assessment:
Fall Spring Summer
- Functional Anatomy - 25 students 4 sections Fall + Spring (8 total) 1 section Summer
- Adv. Functional Anatomy (masters) 35 students or 2 sections of 15-17
- lower body evaluation 3 credit Lab 35 students or 2 sections

- upper body evaluation 2 sections 15 - students
- lecture 20 min
lab ↓ 20 min
lecture ↓ 20 min

Lab
- need airlock class
• plinth tables
• models / skeletons
• Storage
• 2 students per table / 10 tables

cadaver lab

② Emergency Care:
- first-aid/CPR - 4 sections (fall) 25 students 6-8 sections (spring) 2 sections (summer)
• skills based
• table access
• first-aid
- splinting

- * Open floor space
- * Storage for equipment

- ATEP 530 - 2 sections fall 17 students
• airways
• wound management
• tables (plinth)
• ICE machine (access)
• first-aid
• casting
• sinks

③ therapeutic intervention:

- 2 sections summer 15-17 students
- " " ~~fall~~ fall " " (ICE machine)
- " " fall " "
- " " Spring " "

lower body
post rehab
upper body

← 20min → lab
← 20min →

- Didactic lecture
- plinth tables - 50% time / 2 per student / 10 tables
- open space → strength training range of motion (Shared equipment)
- ultra sound
- water "wet space" - whirl pools (4)

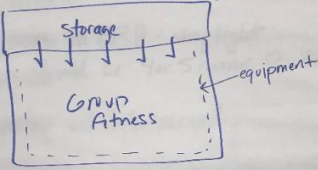
open space ← 2 full body / 2 smaller

'Moravian College - circular set up
- Screens above tables

- 10' plus ceiling height

Strength + Physical Activity

- Group Fitness Room
- Strength + conditioning - resistance training
- platforms or wall mounted rigs



- 1 ~~class~~ class full time (@ Fairfax) "intro"
- 2 sections F/S/S 4 total 20 students
- Strength + cond. / Fitness classes (Grad) 1/2 time
- motor learning class

- Open lab for all programs

Nelson Force Plates

- central / Need linear?
- running or sprinting → harness system
- configurable

Computer Lab

- look @ Data Forceplate / motion capture EML6 / Bod Pod
- open lab space
- 5-10 students / Cond + Pod
- "teaming area" within space
 - Breakout or enclosed
- table + technology / longer stay

Changing rooms

- restroom
- changing area
- shower
- close proximity

End of Meeting

The above constitutes my understanding of the items discussed and the decisions reached. If there are any additions or corrections, please, contact the undersigned.

Signed: Rebecca Ross / Brian Tucker

Cc: Attendees

Date: June 26, 2019